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Scientific and Engineering Computation System at Kawasaki Steel

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FACOM VP-50

Synopsis :
At Kawasaki Steel, a scientific and engineering computation system has been developed, from the earliest utilization of management science, through its applications ranging from the heat transfer analysis, structural analysis and control system to the analysis of a large scale model by supercomputer such as the fluid flow analysis. This paper describes the features of main applications which include the heat transfer analysis of blast furnace hearth molten metal flow analysis in the continuous casting mould stress analysis of the work roll shift mill, and simulation of hot tandem mills. The scientific and engineering computation system was developed on the basis of FACOM VP-50 supercomputer by using the corporate network. Additionally, a user supporting system which was very powerful and useful in the scientific and engineering computation was developed and it is also summarized here.

科学技術計算システム*

川崎製鉄技報
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Scientific and Engineering Computation System at Kawasaki Steel

要旨

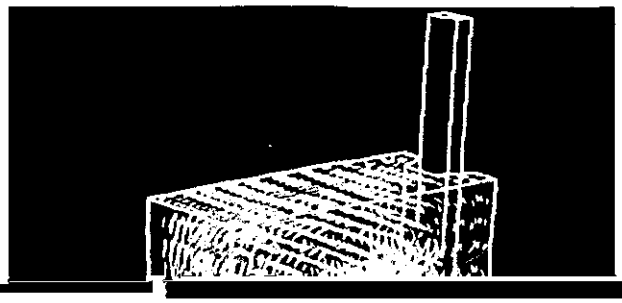
川崎製鉄における科学技術計算は、初期の管理技法の利用から始

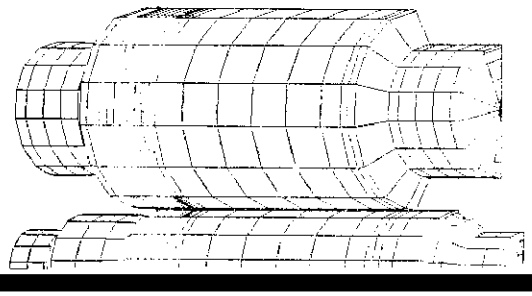
Table 1 History of scientific [illegible] 70

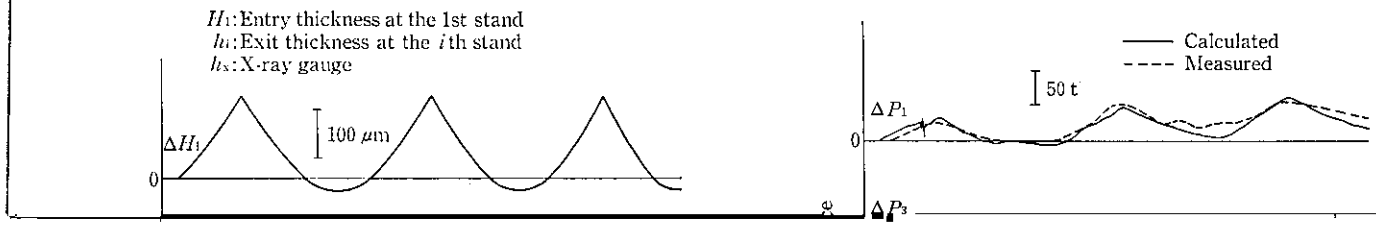
Table 3 List of typical application examples

Iron making	Steel making	Rolling

本事例は，最近注目を集めるようになった境界要素法と実験的回




Backup
roll
Work


H_1: Entry thickness at the 1st stand
h_i: Exit thickness at the ith stand
h_x: X-ray gauge
ΔH_1
100 μm
0
Calculated
Measured
50 t
ΔP_1
0
ΔP_3

- G800 ------------------------ 各種APの実行 ------------------------------

達しているが、今後とも設備改善、操業技術改善および研究